

Work Order ID 61479

September 1, 2010 1:33:14 PM

Page 1

Item ID: D206-642-545

Accept

Revision ID:

Item Name: Skidtube

Start Date: 8/26/10

Start Qty: 1.00

Required Date: 9/06/10

Req'd Qty: 1.00

Cust Item ID:

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run

Start

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

Draw Nbr

Revision Nbr

D3274

Rev D

100

0.00



DC

DOCUMENT CONTROL

Memo

0.00

Document Control

Photocopy bluefile & type labels per PPP D206-642-545

CHG00

CHG002

8/10/10/05

HG for BG 10-10-05

B61479

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Item ID: D206-642-545

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Setup Start

Revision ID:

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Item Name: Skidtube

Start Date: 8/26/10 Start Qty: 1.00

Required Date: 9/06/10 Req'd Qty: 1.00

Cust Item ID:

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start

QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

110

0.00



Skidtubes

Skidtubes

Memo

0.00

1- Fabricate as per Dwg: D3274-043.

2- Bend FWD end of tube using bend prog D3274 FWD dwg D3274, cut fwd end tube with saw table setup D3274

3- Remove fwd indexing ridge as per dwg D3274 and prepare for welding

4 -Weld Fwd Cap as per Dwg D3274 and OSI004. Use aluminum rod.
A/R [] Aluminum Rod []

5- Grind welds flush to Fwd cap on top surface only.

6- Cut AFT end of tube at 170.9" as per dwg D3274 and deburr end.

7- Drill Aft cap pilot hole using DT8025

8 -Cleco DT8025 in position and install pilot hole drill Jig DT8891. Drill 3/16" pilot holes as per Dwg D3274

9- Remove inner indexing ridge on aft end of skidtube as per Dwg D3274 scribe batch#

10- Open aft end cap holes to Ø0.208" as per Dwg D3274. Deburr aft end. []

DP 10-9-1

SAD 10-09-01 (1)

BE 10/09/01

BE 10/09/01

DP 10-9-2

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Item ID: D206-642-545

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Cust Item ID:

Required Date: 9/06/10 Req'd Qty: 1.00



Customer:

Reference:

Run Start



Approvals: Process Plan:

Date:

Tooling:

Date:

Stop



QC:

Date:

SPC (Y/N):

Date:

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

120

Chemical Conversion Coat per QSI005 4.1

0.00

[Handwritten signature]

10-9-7

(1)



HandFinish

Memo

0.00

Hand Finishing

130

QC3- Inspect Part Finish

0.00

BE

(1)

-

10/09/07

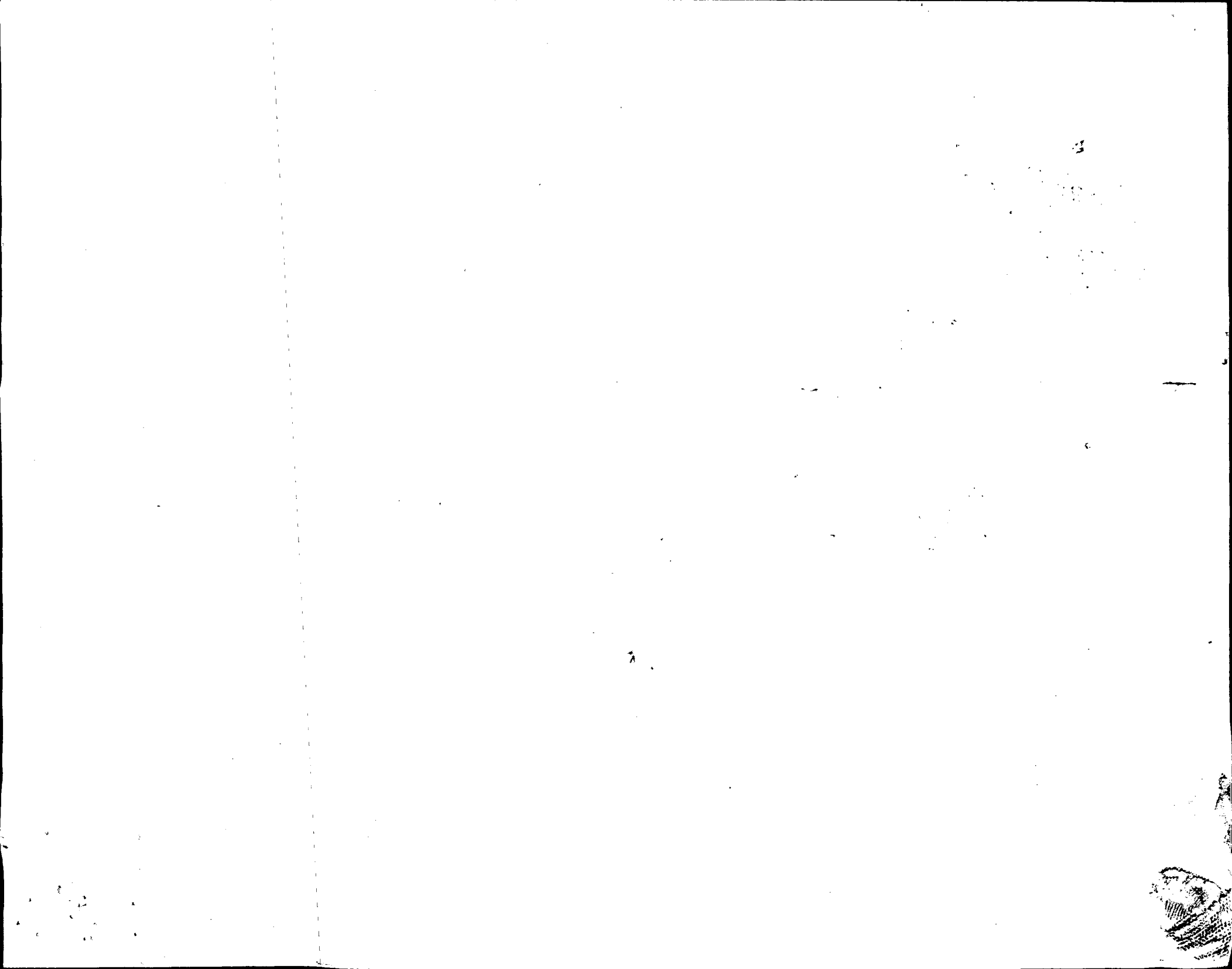


QC

Memo

0.00

Quality Control



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Item ID: D206-642-545

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Cust Item ID:

Required Date: 9/06/10 Req'd Qty: 1.00



Customer:

Reference:

Run Start



Approvals: Process Plan: Date: Tooling: Date:

Stop



QC: Date: SPC (Y/N): Date:

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID Tool # Plan Code Accept Qty Reject Qty Reject Number Insp. Stamp

140

0.00



Skidtubes

Skidtubes

Memo

0.00

1-Open Ø0.313" and 0.375" crossbolt spacer holes as per Dwg D3274

2-deburr crossbolt spacer holes as per Dwg D3274 and blow out chips from inside the tube

3-Bond web in place as per Dwg D3274 & QSI 015.

A/R Sikaflex-291 11/5/14

Sikaflex expire date: 11/01/30

Start: 10/09/08 Time: 10:30

Finish: 10/09/08 Time: 11:15 AM

(Adhere for 12 hours)

DP 10-9-7

B

BB

10/09/08

150

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

Quality Control

10/09/09

GL

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Item ID: D206-642-545

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Setup Start

Revision ID:

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Item Name: Skidtube

Start Date: 8/26/10 Start Qty: 1.00

Cust Item ID:

Required Date: 9/06/10 Req'd Qty: 1.00

Customer:

Reference:

Run Start

Approvals:

Process Plan:

Date:

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

160

0.00



Skidtubes

Skidtubes

0.00

Skidtubes

Memo

1-Bend AFT end of tube using bend prog. D3274 AFT as per dwg D3274. Install drop pins in crosshatch spacer holes to maintain web position. 2- DRILL PILE OF HOLES FOR WEARPLATES USING D3274-TT2 OPEN HOLES TO .297" 3- DRILL TOE PIN HOLE .640" DIA AS PER DWG USI

SEL 170 L

1944

1945

1946

1947

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Item ID: D206-642-545

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Setup Start



Revision ID:

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Item Name: Skidtube

Start Date: 8/26/10 Start Qty: 1.00



Cust Item ID:

Required Date: 9/06/10 Req'd Qty: 1.00



Customer:

Reference:

Run Start



Approvals: Process Plan:

Date:

Tooling:

Date:

Stop



QC:

Date:

SPC (Y/N):

Date:

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

170

0.00



Skidtubes

Skidtubes

Memo

0.00

Skidtubes

1-Bend AFT end of tube using bend prog. D3274 AFT as per dwg D3274. Install drop pins in crossbolt spacer holes to maintain web position.

DP 10-9-15

2- DRILL PILOT HOLES FOR WEARPLATES USING D3274-1T2
OPEN HOLES TO .297"

3-DRILL TOE PIN HOLE .640" DIA AS PER DWG USING DT8935 FWD
END OF TUBE
DEBURR INSIDE OF HOLE AS NECESSARY (DO NOT ENLARGE HOLES)
REMOVE ANY FOREIGN OBJECTS INSIDE OF TUBES

BB 10/09/16

4- Countersink crossbolt spacer holes as per Dwg D3274

5- prepare for welding

6-Insert D2649 & D3275-1 crossbolt spacers. Weld as per QSI 004 and Dwg D3274. Remember to back drill each hole before welding the other side. Use aluminum rod
A/R [] Aluminum Rod []

M112507 BE 10/09/28

7-Grind cross bolt welds flush as per Dwg D3274.

8-Counterbore 5/16" x 0.750" deep as per Dwg D3274. Use DT8743 visual aid
Jig and deburr.

3 BE 10/09/30

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Item Name: Skidtube

Stop



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Cust Item ID:

Required Date: 9/06/10 Req'd Qty: 1.00

Customer:

Reference:

Run Start



Approvals: Process Plan: Date: Tooling: Date:

Stop



QC: Date: SPC (Y/N): Date:

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

180

QC10- Inspect visual per QSI004- ground welds

0.00



QC

Memo

0.00

8/10/09/29

Quality Control

190

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

h2 3.25"
L2 5.4"

8/10/09/29

(76)

Quality Control

200

White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum

0.00



Powdercoat

Memo

0.00

M115291

10-9-30

PTO = 7

Powder Coating

START TIME:

1:35

OVEN TEMPERATURE:

3:00 FINISH TIME:

2:05

① ②

Dart Aerospace Ltd

W/O: 61479		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
10/09/30	190.1	Reallocate & pressure wast as per PAIR-013 Perm change	JP	10/09/30	X1		

Part No: D206-642-545 PAR #: _____ Fault Category: SKIDABLE NCR ☒ Yes No DQA: ✓ Date: 10/10/22
 Resolution: Accepted Disposition: USE AS IS QA: N/C Closed: ✓ Date: 10/10/22

NCR 61479		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
10/9/25	# 190	Found at inspection that the AFT Bend is measuring 3.25" high (30) and at angle of 5.4° (4.5).	JP 10/09/25 QPS/042	Acceptable. LESS BENDING MOMENT FROM FLOAT & DRAG LOADING	JP 10-9-15	S 10/09/29	JP 10/09/25 QPS/042	S 10/09/25
		R.C. Process						S 10/09/29

NOTE: Date & initial all entries

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Item ID: D206-642-545

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Setup Start



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Item Name: Skidtube

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Cust Item ID:

Required Date: 9/06/10 Req'd Qty: 1.00



Customer:

Reference:

Run Start



Approvals: Process Plan: Date: Tooling: Date:

Stop



QC: Date: SPC (Y/N): Date:

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
210 QC Quality Control	QC3- Inspect Part Finish Memo	0.00 0.00	<i>JL</i>	<i>=> 10110101</i>		<i>1</i>	<i>0</i>		
220 HandFinish Hand Finishing	HAND FINISHING RESOURCE #1 Memo ✓ 1-Install Nut Plate as per Dwg D3274. Apply LPS-3 to Nut Plate and rivets. <input type="checkbox"/> A/RN/ALPS-3 <i>M109956</i> 2-Install inserts as per Dwg D3274. Use a drop of Sikaflex inside insert holes at <input type="checkbox"/> A/RSikaflex-291 <i>M115114</i> Sikaflex expire date: <i>11/10</i>	0.00 0.00	<i>=> JL</i>	<i>10110101</i>		<i>1</i>	<i>0</i>		
230 QC Quality Control	QC5- Inspect part completeness to step on W/O Memo Inspect Nut Plate & Inserts	0.00 0.00		<i>51010101</i>		<i>(+)</i>			

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Item ID: D206-642-545

Accept



Setup Start



Revision ID:

Stop



Item Name: Skidtube

Start Date: 8/26/10 Start Qty: 1.00



Cust Item ID:

Required Date: 9/06/10 Req'd Qty: 1.00

Customer:

Reference:

Run Start



Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

240

0.00

⇒ M

10/10/04



HandFinish

HandFinishing

Memo

0.00

Hand Finishing

2-Install wearpads & gaskets as per Dwg D3274. ☐3-Install ring as per Dwg D3274 ☐A/RSikaflex-291 11/1/11 ☐Sikaflex expire date: 11/01 ☐4-Inspect for foreign objects as per QSI 024 ☐5-Spray inside of tube on both sides of web NA

250

0.00

S 10/10/04



QC

QC5- Inspect part completeness to step on W/O

Memo

0.00

Quality Control

260

0.00



Packaging

Packaging

Memo

0.00

Packaging

Packaging

NEUA

Comp

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Item ID: D206-642-545

Accept



Setup Start



Revision ID:

Stop



Item Name: Skidtube

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Cust Item ID:

Required Date: 9/06/10 Req'd Qty: 1.00



Customer:

Reference:

Run Start



Approvals: Process Plan:

Date:

Tooling:

Date:

Stop



QC:

Date:

SPC (Y/N):

Date:

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

270

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

10/10/12
MF
10-10-12

Picklist Print

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Page 1

Work Order ID: 61479

Parent Item: D206-642-545

Parent Item Name: Skidtube



Start Date: 8/26/2010

Required Date: 9/6/2010

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP Rev:A New Issue 06-10-06 JLM
 IPP Rev:B Added SS Wearplates & Gaskets 07-02-23 JLM
 IPP Rev:C ECN 1080p 07-12-06 DD verified by:
 IPP Rev:D as per PAR 08-015 08-04-17 DD verified by:ec
 IPP Rev:E 08-10-09 revise details DD verified by:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D2600-1-190 		Manufactured	No			110	Each	74.0000	1	1			
Extrusion Round 3" 206													
<div> <div>Location</div> <div>Loc Qty</div> <div>Loc Code</div> </div>													
<div> <div>LG</div> <div>74</div> <div></div> </div>													
<div> <div>47575</div> <div>26</div> <div></div> </div>													
<div> <div>59874</div> <div>48</div> <div></div> </div>													
D2646 		Manufactured	No			120	Each	72.0000	1	1			
Aft Cap													
<div> <div>Location</div> <div>Loc Qty</div> <div>Loc Code</div> </div>													
<div> <div>FP-4</div> <div>63</div> <div></div> </div>													
<div> <div>57332</div> <div>63</div> <div></div> </div>													
<div> <div>FP6</div> <div>9</div> <div></div> </div>													
<div> <div>52663</div> <div>9</div> <div></div> </div>													
D3285-1 		Manufactured	No			140	Each	144.0000	1	1			
Cap													
<div> <div>Location</div> <div>Loc Qty</div> <div>Loc Code</div> </div>													
<div> <div>LG</div> <div>144</div> <div></div> </div>													
<div> <div>52511</div> <div>74</div> <div></div> </div>													
<div> <div>52647</div> <div>70</div> <div></div> </div>													

① DP 10-9-1

ML 10/10/04

X1

BE 12/09/01

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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Work Order ID: 61479

Parent Item: D206-642-545

Parent Item Name: Skidtube

Start Date: 8/26/2010

Required Date: 9/6/2010

Start Qty: 1.00

Required Qty: 1.00

D2649 Manufactured No 170 Each 29.0000 12 12

 Cross Bolt Spacer

Location

Loc Qty

Loc Code

LG

29

58545

2

60652

27

B6496 12 SE 10/09/28

D3282-041 Manufactured No 170 Each 2.0000 1 1

 Float Web (206L/407)

Location

Loc Qty

Loc Code

LG

2

59886

2

BB 10/09/08

CCR264SS3-3 Purchased No 220 Each 472.0000 2 2

 Cherry Rivet

Location

Loc Qty

Loc Code

ST311

472

112314

4


113539

44

113973

424

10/10/04

CR3212-4-03 Purchased No 220 Each 1,912.000 2 2

 Cherry Rivet

Location

Loc Qty

Loc Code

ST311

1912

111359

5

112314

2

114436

448

114450

83

114859

1374

X2

10/10/04

X2

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Shop Packet Print

Page 2

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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Work Order ID: 61479

Parent Item: D206-642-545

Parent Item Name: Skidtube

Start Date: 8/26/2010

Required Date: 9/6/2010

Start Qty: 1.00

Required Qty: 1.00

D3275-1 Manufactured No

220

Each

48.0000

37

37



Crossbolt Spacer

Location

Loc Qty

Loc Code

LG

48

53453

8

60653

40

B 61646 37 DE 10/09/28

D3415-041 Manufactured No

220

Each

58.0000

1

1



Nut Plate

Location

Loc Qty

Loc Code

ST056

58

33842

58

ALS7-1032-130 Purchased No

240

Each

1,378.000

78

78



Insert

Location

Loc Qty

Loc Code

FP

861

115079

861

ST282

517

113238

17

115502

500

M114723 x78

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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Parent Item Name: Skidtube

Start Date: 8/26/2010

Required Date: 9/6/2010

Start Qty: 1.00

Required Qty: 1.00

AN3C4A Purchased No 240 Each 1,769.000 80 80



BOLT



Jul 10/10/04

Location

Loc Qty

Loc Code

ST303

500

115438

500

ST350

1269

114108

14

114416

12

114523

2

114941

241

115300

1000

y80

AN4C5A Purchased No 240 Each 506.0000 1 1



BOLT



Jul 10/10/04

Location

Loc Qty

Loc Code

ST346

506

110552

11

112243

495

X1

AN960C10L NAS1149C0332 Purchased No 240 Each 155.0000 80 80



washer



Jul 10/10/04

Location

Loc Qty

Loc Code

ST245

155

107534

29

109545

54

111548

72

M115816

X36

M115698

X44

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W/O:		WORK ORDER CHANGES					
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

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Work Order ID: 61479

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Parent Item Name: Skidtube

Start Date: 8/26/2010

Required Date: 9/6/2010

Start Qty: 1.00

Required Qty: 1.00

AN960C416 NAS1149C0463 Purchased No

240 Each

107.0000

1

1



washer



10/10/04

Location

Loc Qty

Loc Code

ST346

107

100993

107

X1

D3413-1 Manufactured No

240 Each

48.0000

1

1



Ring



10/10/04

Location

Loc Qty

Loc Code

ST473

48

51586

1

53446

23

61322

24

X1

D3535-15 Manufactured No

240 Each

20.0000

1

1



Wearshoe



10/10/04

Location

Loc Qty

Loc Code

FP18

20

59236

7

61241

13

X1

D3535-23 Manufactured No

240 Each

7.0000

1

1



Wearshoe



10/10/04

Location

Loc Qty

Loc Code

FP21

7

60864

7

361830

X1

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W/O:		WORK ORDER CHANGES					
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Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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Parent Item Name: Skidtube

Start Date: 8/26/2010

Required Date: 9/6/2010



Start Qty: 1.00

Required Qty: 1.00

D3535-35 Manufactured No 240 Each 9.0000 1 1
  20 10/10/04
Wearshoe



Location Loc Qty Loc Code

FP018 9 ~~356105~~ X1
60232 9 1360865 1

D3535-39 Manufactured No 240 Each 22.0000 1 1
  20 10/10/04
Wearshoe X?



Location Loc Qty Loc Code

FP18 22 X1
58214 5 1
60233 17 1

D3536-15 Manufactured No 240 Each 22.0000 1 1
  20 10/10/04
Gasket

Location Loc Qty Loc Code

FP 16 1
56055 4 1
60875 12 1
FP11 6 1
59238 6 1

D3536-23 Manufactured No 240 Each 10.0000 1 1
  20 10/10/04
Gasket

Location Loc Qty Loc Code

FP011 10 1
60234 10 1361237 X1

Thursday, August 26, 2010 2:41:30 PM

Shop Packet Print

Page 6

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Thursday, August 26, 2010 2:41:30 PM

Page 7

Work Order ID: 61479

Parent Item: D206-642-545



Parent Item Name: Skidtube

Start Date: 8/26/2010



Required Date: 9/6/2010

Start Qty: 1.00



Required Qty: 1.00

D3536-35 Manufactured No 240 Each 13.0000 1 1
  22 10/10/04
Gasket



<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FP012	13	B61692
58683	1	
60235	12	

D3536-39 Manufactured No 240 Each 18.0000 1 1
  22 10/10/04
Gasket

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FP12	18	
58215	4	
<u>58571</u>	14	

D3537-1 Manufactured No 240 Each 20.0000 9 9
  22 10/10/04
Wearpad

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FP	1	
55465	1	B61640
FP017	48	
FP17	19	
57713	3	
60491	16	

D3537-3 Manufactured No 240 Each 10.0000 1 1
  22 10/10/04
Wearpad

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FP19	10	B60866
59711	10	

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Page 7

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Thursday, August 26, 2010 2:41:30 PM

Page 8

Work Order ID: 61479

Parent Item: D206-642-545

Parent Item Name: Skidtube

Start Date: 8/26/2010

Required Date: 9/6/2010

Start Qty: 1.00

Required Qty: 1.00

D3672-1

Manufactured No

240

Each

931.0000

2

2



22 10/10/04

Phenolic Washer

Location

Loc Qty

Loc Code

ST077

931

42329

150

52505

781

x2

Thursday, August 26, 2010 2:41:30 PM

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Page 8

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART

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07.02.12

DEO ATTACHED

DESIGN CP	DRAWN BY PH	DART AEROSPACE USA, INC. PORT HADLOCK, WA	
CHECKED #	APPROVED #	DRAWING NO. D3274	REV. D SHEET 1 OF 4
DATE 06.12.19		TITLE SKIDTUBE ASSEMBLY	SCALE NTS
A	04.03.15	NEW ISSUE	
B	04.08.09	MOVE SADDLE HOLE: 42.14 WAS 42.76	
C	05.03.16	ADD -043; NEW INSERTS	
D	06.12.19	NEW INSERTS, SS WEARSHOE + GASKET	

Qty -041	Qty -043	Part Number	Description
X		D3274-041	SKIDTUBE ASSEMBLY
	X	D3274-043	SKIDTUBE ASSEMBLY
1	1	D2600-1-240	EXTRUSION
1	1	D2646	AFT CAP
12	12	D2649	CROSS BOLT SPACER
12	37	D3275-1	CROSS BOLT SPACER
1	1	D3282-041	FLOAT WEB
1	1	D3285-1	CAP
1	1	D3413-1	RING
1	1	D3415-041	NUT PLATE
1	1	D3535-15	WEARSHOE
1	1	D3535-23	WEARSHOE
1	1	D3535-35	WEARSHOE
1	1	D3535-39	WEARSHOE
1	1	D3536-15	GASKET
1	1	D3536-23	GASKET
1	1	D3536-35	GASKET
1	1	D3536-39	GASKET
9	9	D3537-1	WEARPAD
1	1	D3537-3	WEARPAD
78	78	ALS7-1032-130	INSERT (or AKS4-1032-130, ALS4-1032-130, AELS-1032-130)
80	80	AN3C4A	BOLT
1	1	AN4C5A	BOLT
1	1	AN960C416	WASHER
80	80	AN960C10L	WASHER
2	2	CCR264SS3-3	RIVET
2	2	CR3212-4-03	RIVET
2	2	NAS1515H3L	WASHER

GENERAL NOTES:

1. TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
2. DAMAGE TOLERANCE ON FWD BEND:
THERE SHOULD BE NO VISIBLE WRINKLES IN THE BEND FROM THE GROUND TO A HEIGHT OF 7 INCHES ABOVE THE GROUND. IT IS ACCEPTABLE TO POLISH OUT GOUGES UP TO 0.020 DEEP IN THE BENT PORTION OF THE TUBE. A MAXIMUM REDUCTION IN DIAMETER OF 0.150" IS ACCEPTABLE IN THE BENT PORTION OF THE TUBE.
3. ALL HOLES DRILLED ON CENTERLINES.
4. BOND D3282-041 FLOAT WEB INTO D3274-1/3 OUTER TUBE WITH NON-STRUCTURAL SIKAFLEX-241/291 ADHESIVE PER DART QSI 015. ENSURE HOLES LINE-UP.
5. WELDING TO BE DONE PER DART QSI 004.
6. FINISH: - ACID ETCH, ALODINE ASSEMBLY PER DART QSI 005 4.1
- POWDER COAT WHITE (REF. 4.3.5.1) PER DART QSI 005 4.3
7. DRILL Ø0.297 HOLES FOR ALS7-1032-130 INSERTS USING DT3274-1T2 BEFORE FINISH. INSTALL ALS7-1032-130 INSERTS AFTER FINISH. SEAL WEARSHOE BOLTS WITH SIKAFLEX -241/-291.
8. SPRAY INSIDE OF TUBE WITH A COAT OF LPS LABORATORIES "LPS-3" AFTER FINISH AND INSTALLATION OF INSERTS. COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY, CLEAN EXCESS OFF POWDER COATING WITH MEK DEGREASER.

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

w/o 41479



07.02.12

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DART AEROSPACE USA, INC.
PORT HADLOCK, WA

REV. E

SHEET 2 OF 4

SHEET 2 OF 4

SCALE

1:15

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

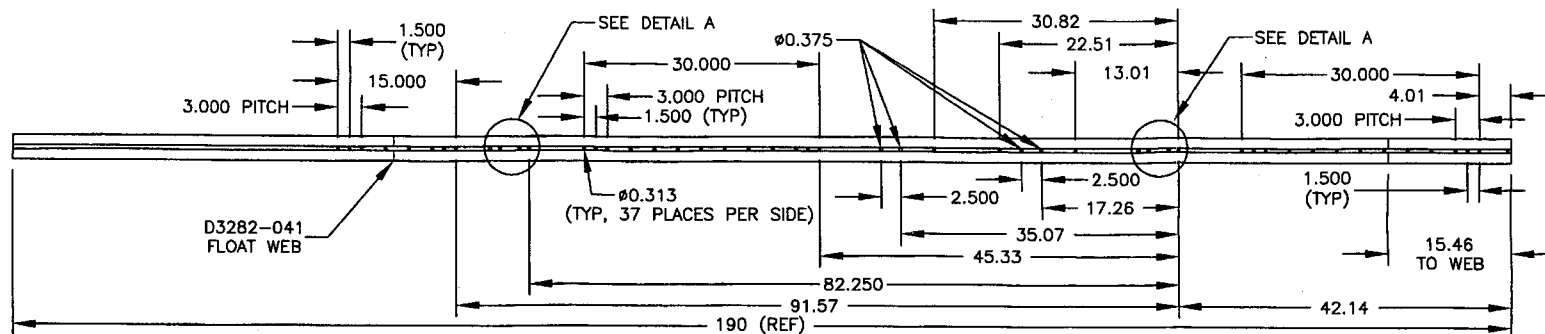
Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

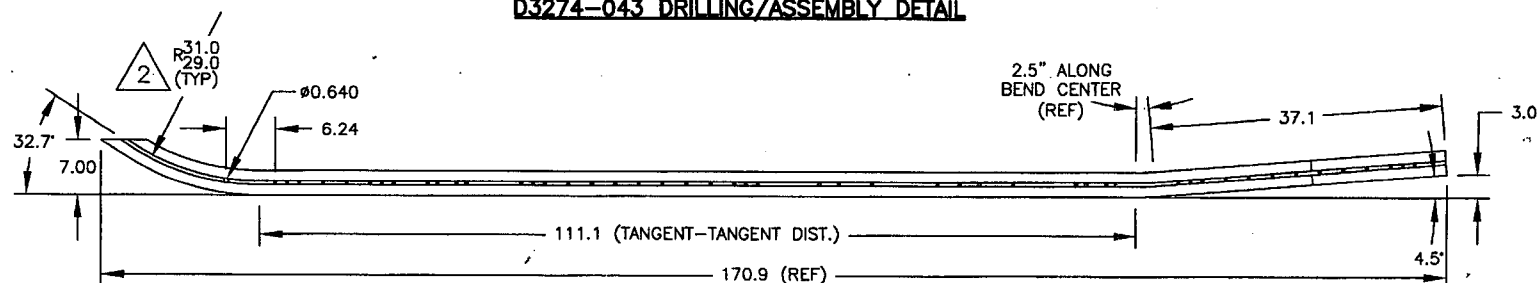
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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

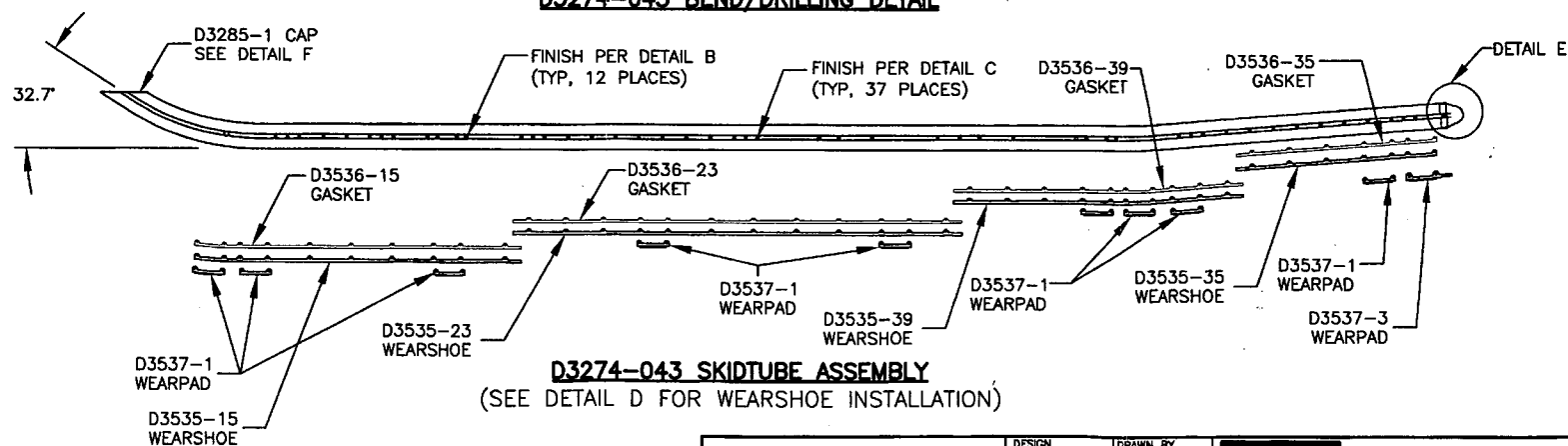
DEO ATTACHED



D3274-043 DRILLING/ASSEMBLY DETAIL



D3274-043 BEND/DRILLING DETAIL



D3274-043 SKIDTUBE ASSEMBLY
(SEE DETAIL D FOR WEARSHOE INSTALLATION)

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07.02.12

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DESIGN	CP	DRAWN BY	PH	DART	DART AEROSPACE USA, INC.
CHECKED	#	APPROVED	#	DRAWING NO.	D3274
DATE	06.12.19	TITLE	SKIDTUBE ASSEMBLY	REV. D	SHEET 3 OF 4
				SCALE	1:15

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

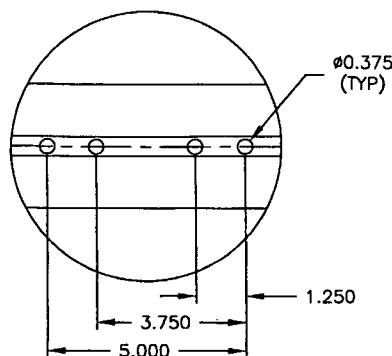
Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

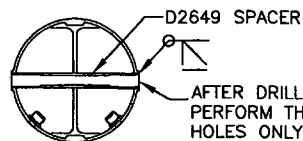
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DETAIL A: DRILL DETAIL

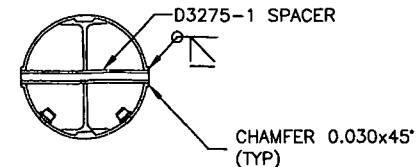


DETAIL B FOR 0.375 HOLES ONLY

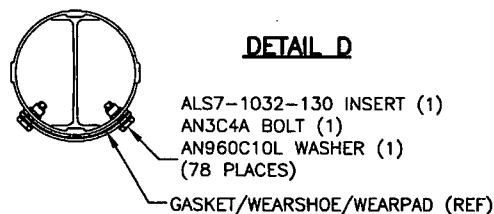


AFTER DRILLING AND BENDING ASSEMBLY
PERFORM THE FOLLOWING FOR 0.375
HOLES ONLY:
1. CHAMFER HOLE 0.030x45°
2. INSERT D2649 SPACER
3. WELD INTO PLACE AND GRIND FLUSH
4. C'BORE TO 0.313x0.75 DEEP

DETAIL C FOR 0.313 HOLES ONLY

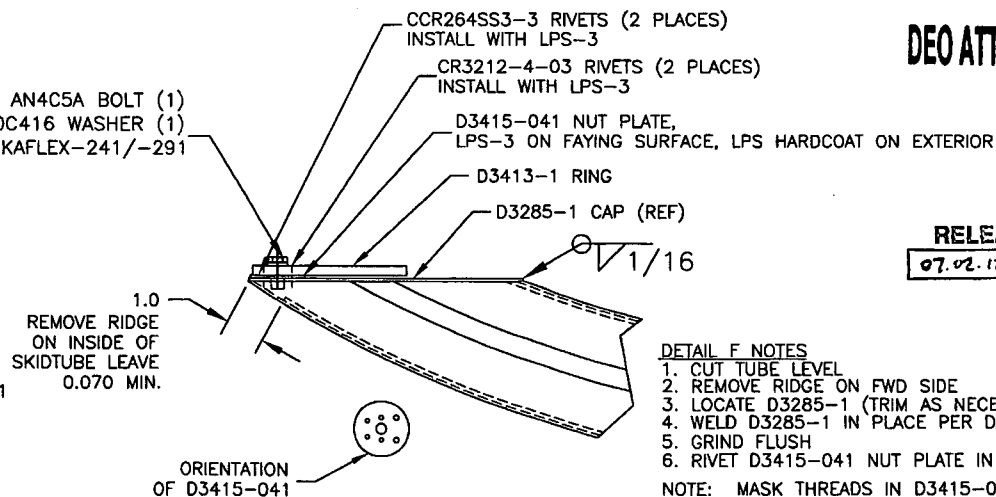


DETAIL D



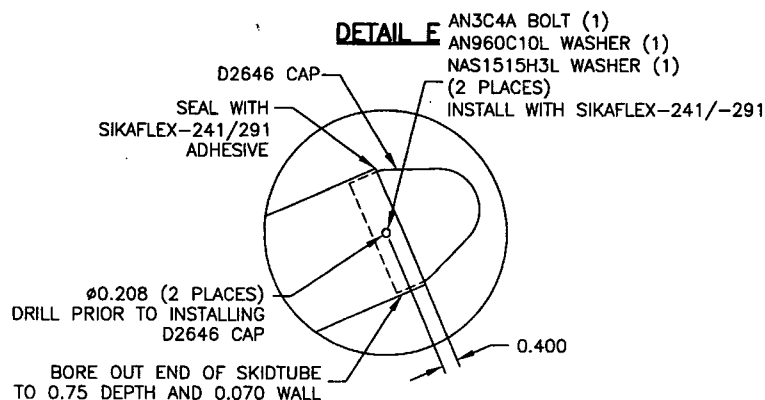
AN4C5A BOLT (1)
AN960C416 WASHER (1)
INSTALL WITH SIKAFLEX-241/-291

DETAIL F: END FINISHING DETAIL



DETAIL F NOTES
1. CUT TUBE LEVEL
2. REMOVE RIDGE ON FWD SIDE
3. LOCATE D3285-1 (TRIM AS NECESSARY)
4. WELD D3285-1 IN PLACE PER DART QSI 004
5. GRIND FLUSH
6. RIVET D3415-041 NUT PLATE IN PLACE
NOTE: MASK THREADS IN D3415-041
PRIOR TO FINISH

DETAIL E



DEO ATTACHED

RELEASED
07.02.12

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CHECKED	DATE	CP	PH	DRAWING NO.	REV. D
#	06.12.19	#	#	D3274	SHEET 4 OF 4
TITLE				SCALE	
SKIDTUBE ASSEMBLY				1:3	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

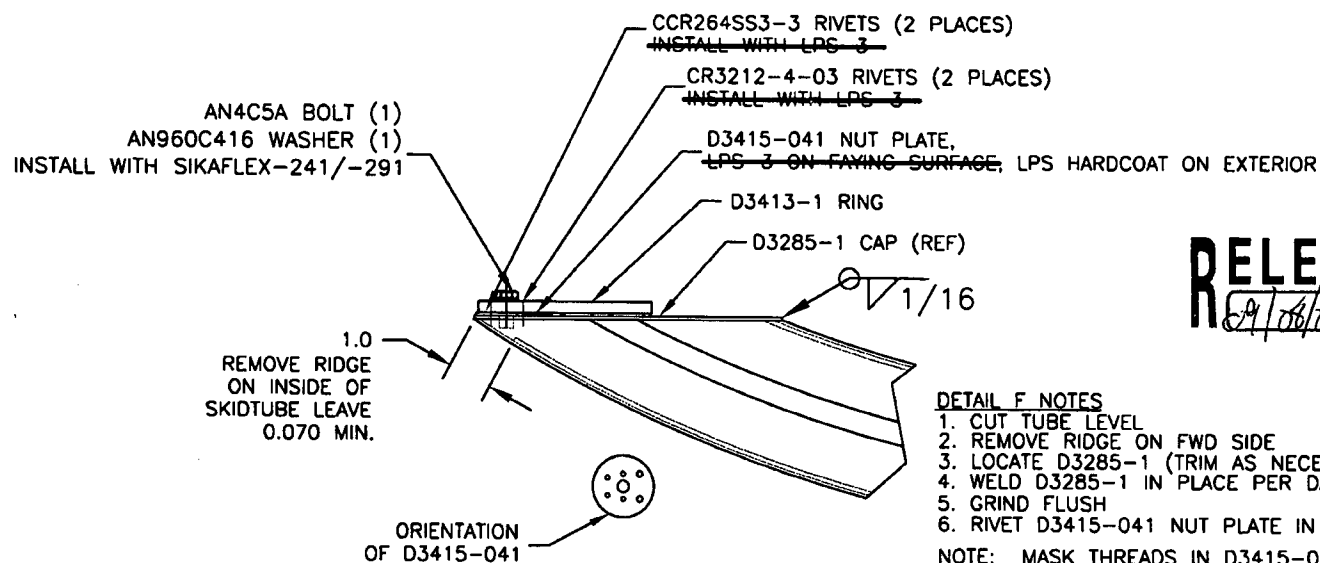
DRAWING NO. D3274	TITLE SKIDTUBE ASSEMBLY	REV. D	DART AEROSPACE USA, INC	D.E.O. NO. D3274-D-1	SHEET NO. SHEET 1 OF 1	SCALE NTS
DRAWN <i>CP</i>	CHECKED <i>A</i>	MFG. APPR. <i>A</i>	APPROVED <i>MAP</i>	DE APPR. <i>#</i>		
DATE 09.06.17	DATE 09.06.23	DATE 09/06/23	DATE 09/06/23	DATE 09.06.23		

LPS-3 IS NO LONGER USED DURING ASSEMBLY OF SKIDTUBE.

AMEND NOTE 8: "~~SPRAY INSIDE OF TUBE WITH A COAT OF LPS LABORATORIES 'LPS 3' AFTER FINISH AND INSTALLATION OF INSERTS.~~
COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES 'LPS PROCYON' AFTER FINAL ASSEMBLY, CLEAN EXCESS OFF
POWDER COATING WITH MEK DEGREASER."

AMEND DETAIL F AS SHOWN:

DETAIL F: END FINISHING DETAIL



RELEASED
09/06/06

DETAIL F NOTES

1. CUT TUBE LEVEL
2. REMOVE RIDGE ON FWD SIDE
3. LOCATE D3285-1 (TRIM AS NECESSARY)
4. WELD D3285-1 IN PLACE PER DART QSI 004
5. GRIND FLUSH
6. RIVET D3415-041 NUT PLATE IN PLACE

NOTE: MASK THREADS IN D3415-041
PRIOR TO FINISH

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

NO. 251

AWS D17.1.2001
QUALIFICATION TEST RECORD

Name: Berclay Elliott
Job number: 61039
Part number: D206-H12-441
Description: 206 skid tube
Welding Process: Tig[☒] Mig[]
Base material: Aluminium
Current: AC[☒] DC[]

TEST REQUIREMENTS AND RESULTS

Visual: pass[☒] fail[]
Penetration: pass[☒] fail[]

UNACCEPTABLE

Cracks: pass[☒] fail[]
Undercut: pass[☒] fail[]
Pin holes: pass[☒] fail[]
Overlap (cold lap): pass[☒] fail[]
Porosity (surface): pass[☒] fail[]
Coloration: pass[☒] fail[]

Qualifier Del Del Date of Test Coupon 10.08.19

Welder Berclay Elliott Date of Test Coupon 10.08.19

The above named individual is qualified in accordance with AWS D17.1.2001 to weld